

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Review of the Emergency Alert System) EB Docket No. 04-296
)

To: The Commission

COMMENTS OF ALERT SYSTEMS, INC. ON FURTHER NOTICE
OF PROPOSED RULEMAKING

These Comments are submitted on behalf of Alert Systems, Inc. (“ASI”) in response to the Further Notice of Proposed Rulemaking (“FNPRM”) issued on November 10, 2005, in EB Docket No. 04-296. The primary objective of this proceeding is to identify those actions that the Commission should now and in the future take to promote the development of a more comprehensive emergency alert system (“EAS”).

Introduction

ASI is an industry leader in the provision of advanced, strategic information delivery/location-based solutions to emergency service providers, digital network operators and the public at large. ASI has developed and patented “EMAlert”, a communications technology that integrates strategic information delivery, location based computing and digital broadcasting using existing infrastructure and various digital devices, with the ability to determine their location and receive, filter and present information based on that location. Use of EMAlert will

allow network operators to broadcast a simultaneous, private, highly-targeted message (geographically or to affinity groups) to enabled digital devices.

With the public warning technology it has developed, ASI has demonstrated the feasibility of meeting the critical level of warning system performance, specifically the delivery of localized information to at least 85% of an affected public in 90 seconds and performing warning, mobilization of external resources and local interagency notification in less than 2 minutes. We believe that these critical levels of effectiveness and operational efficiency are key to practical usage of threat modeling and other advanced incident command capabilities by local emergency management agencies.

Our system applies smart receiver methods and leverages digital communications infrastructure. Smart receiver methods are applicable to fixed-site, cell-phone, automobile telematics and other devices. Smart receivers individually determine the applicability of messages to the receiver owner/user including location within a geographic area of variable size and shape and language. Individual receivers can be commissioned to acknowledge messages, return utility status, and mass mobilize by responder function and other criteria. Smart receivers ignore duplicate messages, discard obsolete messages and solve difficult human factors problems with urgency coding and other features. They can be used to drive EAS decoders, highway signage, computer networks, factory sirens, and signaling devices used by people with hearing disabilities.

These smart receivers can be made to operate by means of the unused, non-congesting broadcast capabilities of the nation's cellular infrastructure (GSM-Cell Broadcast, CDMA-Broadcast SMS), satellite direct, and other digital last-mile channels. When cellular is used, we

believe that smart receivers can be built with high-integration components, enabling the manufacture by later this year of low-end handsets at a cost of no more than \$30 per handset. A command computer/communications server coordinates this and other “last mile” channel activities. When suitably networked, these local warning/mobilization systems invite formation of a comprehensive, unified incident command/decision support (“UICDS”) capability through systematic upgrades.

Given its unique industry role, ASI believes that it is well positioned to address the important issues that the Commission has raised in the FNPRM. Specifically, in these Comments, ASI will address the following four subjects: (1) the criticality of mobile communication capabilities for any viable future EAS system; (2) the interrelationship between public warning, mobilization and other response and recovery functions; (3) the need for a comprehensive, unified incident command/decision support system; and (4) the role of the Commission.

I. The Criticality of Mobile Communications Capabilities for Any Viable Future EAS System

Digital broadcasting, using the global cellular infrastructure as the primary delivery method, is an essential element of any comprehensive public warning solution. The United States has become an increasingly mobile society, with its residents relying each day to a greater and greater extent on portable wireless devices. Should an urgent need arise to communicate an emergency alert on any broad basis, it is clear that the ability to utilize mobile wireless devices in such an undertaking may represent the single most effective means for doing so. Conversely, an emergency alert system that lacks the full involvement and integration of wireless technology will simply be wholly insufficient to do the job.

Given the unique characteristics of mobile wireless networks, any viable emergency alert solution must be capable of accomplishing the following five key objectives:

- Getting the *right* message
- To the *right* people
- At the *right* time
- In the *right* place
- In order to take the *right* action or make the *right* decision

Failure to achieve any one of these objectives would seriously diminish the value and effectiveness of any emergency alert network. Preferably, such a system should be capable of being provided as a managed service, with real time reliability. Moreover, the system needs to be headache free, meaning that there are no database requirements, that multiple communication paths are used, that it is a highly geo-targeted and incorporates Common Alert Protocol and Emergency Data eXchange Language, and that it takes advantage of common handset integration while using pre-determined warning schemes. As such, the optimum approach is not necessarily found in either a pure point-to-multipoint or cell broadcast approach. Rather, to be most valuable, there is the need for targeted location type of services.

II. The Interrelationship Between Public Warning, Mobilization and Other Response and Recovery Functions

Viewed from a broader perspective, public warning activities are inextricably interwoven with mobilization and other response and recovery functions in major disasters. In addition, at least eight major categories of stakeholders have missions or interests directly related to the incident command situation:

1. Federal Government
2. State Governments
3. Local agencies with major crisis management missions
4. Technology providers (equipment manufacturers, communications carriers including radio/TV media, innovators)
5. Organizations with risk and liability interests (city/county risk managers, risk pool managers, insurance firms, operators of critical infrastructure including utilities, hospitals, dams, nuclear power and chemical plants)
6. Organizations with hazards research, education, and policy study missions
7. Auxiliary service providers (Red Cross, Urban Search & Rescue, etc.)
8. Private and public advocates for people who are deaf, elderly, or otherwise disabled

Such roles and interests must be considered in the larger context of the incident command/decision support, including the following four processes at the core of all disaster management efforts:

- Data gathering
- Information management
- Knowledge formation
- Knowledge dissemination (i.e., public warning, mobilization and related activities)

The ability of the average local incident manager to perform these four core processes of disaster management has barely budged over the last fifty years despite great advances in technology. It shows that advances in technology are now outpacing cycles of Congressional appropriations, program development, grant writing, and procurement. The performance gap problem includes public warning activities. Bold steps are now needed to close the gap.

III. The Need for A Comprehensive, Unified Incident Command/Decision Support System

The larger incident command problem dictates formation of UICDS system. The Commission should take all necessary steps to foster a UICDS system by considering the EAS to be an integral part of that larger system rather than a stand-alone entity. The issuance of warnings depends on the other core functions of disaster management. To maximize disaster responsiveness and effectiveness, all functions must be efficient and tightly coupled.

Local, state, regional, as well as federal incident managers must be given direct, immediate access to all last-mile communications channels including the EAS. Local, state and regional emergency management agencies need to have the means to operate self-sufficient incident command efforts for other crises. Solutions that depend on a single centralized command and control hub or communications infrastructure, particularly when that infrastructure is located in a major metro area, should be avoided.

Moreover, the Commission should eschew the notion that the EAS or any other warning channel is “owned” by a particular level of government or agency. The infrastructure underlying disaster management has both national security and local public safety purposes. All levels of government and multiple private sector organizations have joint responsibility for it. Stovepipe approaches to this infrastructure are at the root of interoperability and other problems that plagued the response to Hurricane Katrina.

All last-mile channels should provide multiple functions wherever possible. Upgrades of the EAS system should facilitate the mass mobilization of external resources and local interagency notification as well as improve warning capabilities. Improvements should include a means for confirming message delivery and transmission.

A much higher level of effectiveness and operational efficiency in warning and mobilization activities has to be attained before local emergency management agencies will risk major changes in response templates and practices. Simple updates of technology and interconnections of existing systems cannot achieve this critical performance level.

Not surprisingly, these considerations all coalesce around increased reliance on digital technology. In the case of public warning systems, regular use and readiness dictates geographic granularity much smaller than 1/9 county areas (known as Specific Area Message Encoding or “SAME”). For regular use, the granularity should allow delivery of localized warnings to just those homes surrounding a hostage situation, the neighborhood of a lost child, or the area affected by a flooding stream. It should support the recall or change of a warning once people associated by geographic area are dislocated or set in motion by the event.

Satisfying all of the issues above and many others calls for adoption of an Internet modeled network that is dedicated to disaster management. This highly redundant, broadband network is essential to a comprehensive UICDS capability and for improving the performance of all core process of disaster management. It makes no sense to build a separate network for EAS purposes, particularly if the latter is non-redundant.

IV. The Role of the Commission

The Commission properly belongs on the forefront of the efforts described above. In particular, it needs to help: (1) identify and prioritize the specific steps necessary to achieve the development of a more comprehensive emergency alert system; (2) properly incentive industry to meet those requirements; (3) and monitor to assure that those objective have been met.

We urge the Commission to serve its vital role in a manner that overcomes several fundamental barriers to improved performance of the core processes including public warning activities. We further urge the Commission to encourage: (1) the preparation of a master incident command/decision support infrastructure plan; (2) the formation of a public/private umbrella organization to maintain that plan and to set associated performance metrics and goals; and (3) further EAS improvements within that framework.

Conclusion

The dawn of the twenty-first century has unfortunately carried with it a dramatically heightened appreciation for the importance of comprehensive emergency alert capabilities, to protect the citizenry of this country and all peoples of the world from threats posed from both human-generated and natural catastrophes. ASI is fully committed to helping address this situation through the technology it has developed. We believe that the development of a comprehensive public warning capability that includes the EAS is of paramount importance to the future security of this country and fully support the Commission's efforts to ensure that such a system is implemented in a timely and responsive manner.

Respectfully submitted,

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